
Estimated Productivity Benefit from Habitat Actions by Watershed/Population

ESU: Middle Columbia River Steelhead

Estimates of future improvements to population egg-to-smolt productivity are based on estimated watershed improvements from the implementation of all tribal habitat actions in the MOA. Population improvements are standardized where 1.0 = the current production rate. For example a productivity improvement of 1.54 = 54% improvement over current conditions. Watersheds are weighted according to their relative importance.

All Yakima Steelhead (Mainstem Effects)

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Lower Yakima River	73.8	81.4	86.2	1.1	1.17

Total Estimated Improvement for	All Yakima Steelhead (Mainstem Effects)	Year 10 Impr.	Year 25 Impr.
		1.1	1.17

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Deschutes River Eastside Tributaries Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Buck Hollow Creek	61.2	61.2	61.2	1	1
Deschutes River (Mainstem Effects)	76.5	85.8	90	1.12	1.18
Trout Creek	33.5	33.5	33.5	1	1

Total Estimated Improvement for	Deschutes River Eastside Tributaries Summer Steelhead	Year 10 Impr.	Year 25 Impr.
		1.02	1.03

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Deschutes River Westside Tributaries Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Badger/Boulder/Eagle/Nena/Skookum	47.2	69.8	81.5	1.48	1.73
Beaver Creek	46.6	63	84.2	1.35	1.81
Oak Creek	30	92.5	96.2	3.08	3.21
Shitike Creek	45	77.4	83.6	1.72	1.86
Warm Springs River	84.5	90	94.5	1.07	1.12

Total Estimated Improvement for Deschutes River Westside
Tributaries Summer
Steelhead

Year 10 Impr.	Year 25 Impr.
1.31	1.62

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Hood River Winter Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
East Fork Hood River	70	80.8	85.8	1.15	1.23
Middle Fork Hood River	70	80	90	1.14	1.29
Middle Fork Hood River (Clear Branch)	15	80	90	5.33	6
Middle Fork Hood River (Eliot Branch)	10	85	95	8.5	9.5

Total Estimated Improvement for Hood River Winter Steelhead

Year 10 Impr.	Year 25 Impr.
2.07	2.3

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Klickitat River Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Klickitat Canyon	78.8	78.8	78.8	1	1
Lower Klickitat River	51	52.5	52.5	1.03	1.03
Lower Little Klickitat River	61.5	62	63.5	1.01	1.03
Middle Klickitat River	62.4	73.2	80.3	1.17	1.29
Swale Creek	39.2	47.6	53	1.21	1.35
Trout Creek	55.5	60.2	65.8	1.08	1.19
Upper Klickitat River	56.8	66.2	72.8	1.17	1.28
Upper Little Klickitat River	47.4	47.8	48.5	1.01	1.02
Upper Middle Klickitat River	75.8	76.4	77	1.01	1.02
West Fork Klickitat River	90	92	95	1.02	1.06
White Creek	45	52.2	59.2	1.16	1.32

Total Estimated Improvement for	Klickitat River Steelhead	Year 10 Impr.	Year 25 Impr.
		1.13	1.23

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Lower John Day Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Butte Creek	36.5	62.2	69	1.7	1.89
Pine Creek	68.5	76.2	86.8	1.11	1.27
Pine Hollow	47	64	84	1.36	1.79
Thirtymile Creek	40.5	64.5	77.8	1.59	1.92

Total Estimated Improvement for	Lower John Day Summer Steelhead	Year 10 Impr.	Year 25 Impr.
		1.6	1.91

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Middle Columbia Tributaries Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Alder Creek	64.2	69.2	77	1.08	1.2
Glade Creek	62	67	71	1.08	1.15
Major Creek	52.5	61	75.2	1.16	1.43
Pine Creek (Jupiter Cyn to Headwaters)	45.8	54	61.5	1.18	1.34
Pine Creek (Mouth to Jupiter Cyn)	14	95.5	96.2	6.82	6.87
Wood Gulch	63.8	69.2	77.2	1.08	1.21

Total Estimated Improvement for	Middle Columbia Tributaries Steelhead	Year 10 Impr.	Year 25 Impr.
		2.25	2.38

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Middle Fork John Day Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Big Boulder Creek	38	76	88	2	2.32
Big Creek	36	76	93	2.11	2.58
Butte Creek	29.5	57.8	77.8	1.96	2.64
Camp Creek	13.8	65.8	77.5	4.77	5.62
Dead Cow Gulch	17	87	92	5.12	5.41
Granite Boulder Creek	28.2	66.8	86.8	2.37	3.08
Middle Fork John Day River	44.8	80	91	1.79	2.03
Ragged Creek	32.5	61.2	85	1.88	2.62
Rubby Creek	28.5	62	86.5	2.18	3.04
Vincent Creek	47.5	72	90	1.52	1.89
Vinegar Creek	38.2	83.2	88.2	2.18	2.31

Total Estimated Improvement for	Middle Fork John Day Summer Steelhead	Year 10 Impr.	Year 25 Impr.
		2.04	2.37

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Naches River Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Naches River	70.1	76.2	85.3	1.09	1.22

Total Estimated Improvement for	Naches River Summer Steelhead	Year 10 Impr.	Year 25 Impr.
		1.09	1.22

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North Fork John Day Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Lower N Fk. JD and tribs (mouth to M Fk.)	36.5	37.3	38.5	1.02	1.05
Mid N Fk. JD and tribs (M Fk. to and including Camas Cr.)	45	56.5	68	1.26	1.51
Upper N Fk. JD and tribs above Camas Cr.	62	72	82	1.16	1.32

Total Estimated Improvement for North Fork John Day Summer Steelhead	Year 10 Impr.	Year 25 Impr.
	1.17	1.32

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Rock Creek Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Luna Gulch	65.5	70.5	76	1.08	1.16
Quartz Creek	40.5	51.2	70	1.26	1.73
Rock Creek (Bickleton Road to Headwaters)	38	47.5	66.8	1.25	1.76
Rock Creek (Mouth to Bickleton Road)	35.8	45.5	59	1.27	1.65
Squaw Creek (including Harrison Creek)	65.5	70.5	76	1.08	1.16

Total Estimated Improvement for Rock Creek Steelhead	Year 10 Impr.	Year 25 Impr.
	1.2	1.52

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Satus Creek Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Satus Creek	75	80	85.8	1.07	1.14

Total Estimated Improvement for	Satus Creek Summer Steelhead	Year 10 Impr.	Year 25 Impr.
		1.07	1.14

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South Fork John Day Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
South Fork John Day River	53	78	80.4	1.47	1.52

Total Estimated Improvement for	South Fork John Day Summer Steelhead	Year 10 Impr.	Year 25 Impr.
		1.47	1.52

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Toppenish Creek Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Toppenish Creek	63	71	77.8	1.13	1.23

Total Estimated Improvement for	Toppenish Creek Summer Steelhead	Year 10 Impr.	Year 25 Impr.
		1.13	1.23

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Umatilla River Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Birch Creek	36	55.8	73	1.55	2.03
Meacham Creek	37.5	55.5	74.5	1.48	1.99
Umatilla above McKay Creek	43	53	63	1.23	1.47
Umatilla below McKay Creek	43	53	63	1.23	1.47

Total Estimated Improvement for Umatilla River Summer Steelhead	Year 10 Impr.	Year 25 Impr.
	1.37	1.74

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Upper John Day Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Canyon Creek	10	12	13	1.2	1.3
John Day River	33	53	66	1.61	2
Strawberry Creek	14.5	62.5	70.5	4.31	4.86

Total Estimated Improvement for	Upper John Day Summer Steelhead	Year 10 Impr.	Year 25 Impr.
		1.84	2.22

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Upper Yakima River Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Upper Yakima River	61.6	67.6	75.4	1.1	1.22

Total Estimated Improvement for	Upper Yakima River Summer Steelhead	Year 10 Impr.	Year 25 Impr.
		1.1	1.22

ESU: Middle Columbia River Steelhead

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Walla Walla River Summer Steelhead

Watershed	Est. Future Function for Watershed (Calculated from all Limiting Factors)			Estimated Future Productivity	
	Current	10-Yr Est.	25-Yr Est.	10-Yr Impr.	25-Yr Impr.
Mill Creek	25	56	76	2.24	3.04
Touchet Below Forks	30	38	48	1.27	1.6
Touchet N & S Forks	32	38	56	1.19	1.75
Walla Walla below Forks	28	40	54	1.43	1.93
Walla Walla N & S forks	56	61	66	1.09	1.18

Total Estimated Improvement for Walla Walla River
Summer Steelhead

Year 10 Impr.	Year 25 Impr.
1.43	1.9
